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Research Article

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Delayed Initial Antenatal Care and its Causes in the Central Borough of Cobly (Benin)

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Abstract

Background: Delayed initial antenatal care (ANC1) visit is a major concern of public health in all the developing countries, including Benin.

Objective: Investigating delayed initial prenatal care in pregnant women and associated factors in the central borough of Cobly in 2013.

Method: It was a cross-sectional descriptive and analytical study. It involved and focused on 215 pregnant women who attended ANC from August 5 to September 5, 2013. Data were processed and analyzed using EPI-data and EPI-Info-3.3.2 softwares. The Chi-square statistical test and the prevalence ratio had been used at a 5% significance levelto seek statistical relationships between variables.

Results: Most of respondents investigated in this study were aged between 20 and 34 years, with a mean-age of 23.82 ± 6.34 years. ANC1 (first quarter's care) coverage was 10.23%. Pregnant women had adequate knowledge of the ANC, particularly emphasis on ANC, minimum number of ANC to be performed during pregnancy, signs of complications and danger in the respective proportions of 65.6%, 75% and 69%.

The main factors associated with delayed ANC were: religion, husbands' educational attainment, nature of pregnancy (intended or not), patients' age and woman behaviour towards pregnancy (concealment or not).

Conclusion: ANC1 coverage will be improved through health-focused educational activities at every contact with mothers in or out of pregnancy and by strengthening the population's educational attainment.

Introduction

Adverse pregnancy outcomes are still a public health challenge in African countries. The maternal and neonatal mortality indicators have increased despite women's motivation to attend prenatal care [1].

Prenatal pregnancy monitoring does fit into the framework of apreventive medicine intended to diagnose any intercurrent pathology or pregnancy-caused pathology. This prevention is based on a regular medical follow-up consisting of clinical examination and additional, compulsory or directed tests [2].

To ensure an efficient pregnancy follow-up, the WHO recommends four ANC including one in the first quarter, one in the second quarter, two in the third quarter, the last of which in the ninth month for a normal course of pregnancy. Those prenatal care visits should start in the first quarter to confirm pregnancy, specify its location, assessmaternal status and draw up pregnancy prognosis [3]. The overall remark is that in our areas, pregnant women undertake just a little first quarter care. For Bonono [4] in Cameroon, suboptimal use of ANC strongly limits the impact of measures taken for the Campaign

for Accelerated Reduction of Maternal Mortality in Africa (CARMMA).

In the Tanguieta-Materi-Cobly Health Zone (North-Benin), in 2012 ANC coverage rate wasestimated at 93% but the coverage rate of first quarter antenatal care (ANC1) which was 16% remained almost unchanged as regards 2011 (15.7%) [5]. Accordingly, this means a continuing ANC low coverage rate in the first quarter.

This research work aims to identify the causes and factors associated with delayed initial antennal care in the central borough of Cobly.

Study Setting and Method

It was a cross-sectional, descriptive and analytical study focused on pregnant women who attended antenatal care in the maternities of the central borough of Cobly (Atacora region). Our survey was conducted in the four (04) health centers. It was carried out over a one-month period from August 5 to September 5, 2013. The study population consisted of pregnant women living in the central borough of Cobly for a minimum of six months before starting the survey.We carried

out an exhaustive census of pregnant women who attended antenatal care during the study period. Based on the maternity's monthly forecasts, 225 pregnant women were expected for antenatal care during the survey period. The study variables were sociodemographic (age, nature of pregnancy (intended or not), educational attainment, distance between health center and residencesociocultural religion, traditional practices, concealment of pregnancy), related towoman's knowledge on ANC level of women's knowledge on the following aspects: pregnancy-related risks, advantages of early ANC1, number of ANCs recommended during pregnancy, danger signs during pregnancy). Data were processed and analyzed with Epi data and Epi-info 3.3.2 softwares. Chi^2 statistical test and the prevalence ratio were used at 5% significance threshold to seek statistical relationships between variables.

We obtained approval from the ethics committee of the University of Parakou in the study and had obtained the consent of each pregnant.

Results

ANC1 coverage rate

During our survey, of 225 pregnant women expected, 215 actually attended antenatal care, i.e. 95.6% of which 22 women who actually paid antenatal care visits in the first quarter of pregnancy. Thus, ANC1 frequency was 10.23%.

Respondents' sociodemographic characteristics

Age: The mean age of the investigated women was 23.82 ± 6.34 years, with extremes of 15 and 42 years. The majority, i.e. 62.10% of the respondents was between 20 and 35 years of age.

Religion: 137 pregnant women (63.7%) were Animists, 28 (1.3%) Catholic, 32 (14.9%) Protestants and 18 (8.4%) were Muslims.

Respondents'educational attainment: The respondents were not educated in 61.4% of the cases. The remaining 38.6% had primary school, secondary school, higher education and literacy educational backgroung in respectively 20%, 12%, 5% and 1.6% of the cases.

Sociocultural factors which influenced ANC1 in the first quarter of pregnancy

Concealment of pregnancy: 82 pregnant women out of the 215 respondents indicated that they hid their pregnancy in the first quarter i.e. 38%, 48 (56%) of them because of awaiting pregnancy announcement ceremonies, 62 (76%) for they felt ashamed to carry a pregnancy and 54 (66%) were afraid of witch craft or evil spirits.

Women's point of view about ANC: More than half of the respondents (65.60%) indicated that ANC was compulsory, 31.60% argued that ANC was optional and 2.80% considered that ANC was necessary only when the pregnant woman got sick.

Care for pregnant women during ANC sessions: Care in health facilitiesduring ANC sessions was perceived as very satisfactory, satisfactory and not satisfactory respectively by 25%, 60% and 15% of the patients.

Reasons for delay in ANC1: Several reasons were suggested by the respondents to justify delay in ANC1. At least, two reasons were mentioned for each respondent. Table I presents the frequency distribution of the reasons forwarded by pregnant women to justify delay in ANC1.

Pregnant women's knowledge of ANC: Knowledge of the number of ANC sessions recommended during pregnancy.

According to respondents, that number varies from 2 to 9 and most pregnant women (75%) knew that a minimum of 4 ANC is required during a pregnancy monitoring.

Knowledge about disease prevention during pregnancy: The respondents considered that malaria (83.7%), anemia (41.9%) and neonatal tetanus (28.8%) were the pathologies likely to be prevented through ANC implementation.

Knowledge of early ANC1 advantages: 60% of the respondents indicated that early ANC1 helped prevent pathologies, 54.9% that it helped facilitate delivery, 27% argued it allowed pregnancy develop normally, 25.1% that itenabled detect high-risk pregnancies, 22.8% that it helped manage pregnancy complications and 9.3% that it enabled to avoid maternal and newborn deaths.

Reasons for delay in ANC1	Number	Relative frequencies (%)
Awaiting announcement ceremony	148	68.8
Lack of money	148	68.8
Ignorance of ANC interests and advantages	41	19.1
Long distance between Health center and Residence	14	6.5

Table 1: Frequency distribution of the reasons justifying delay in ANC1 according to pregnant women investigated in the central Borough of Cobly in 2013.

Factor affecting the implementation of early antenatal care (ANC1)

Husbands'educational attainment and ANC1: Table I2 shows ANC1 frequencies distribution in investigated pregnant women according to husbands' educational attainment. Distance between woman's home and health centerand ANC1.Table 3 shows the distribution of frequencies of ANC1 implementation by the investigated pregnant women according to distance between their homes and health center.

Husbands' educational attainment	ANC1		Total
	Early	Delayed	
Educated	15 (16%)	76 (84%)	91
Illiterate	7 (6%)	105 (94%)	112

	22	181	215
Total			
X^2=5.40 ,ddl=1, P=0.02			

Table 2: Distribution of ANC1 implementation frequency in investigated pregnant women according to husbands' educational attainment in the central borough of Cobly in 2013.

Health center-Residence distance	ANC1		TOTAL
	Early	Delayed	
Less than 5 km	6 (11%)	50 (89%)	56
Between 5 and 9 km	7 (9%)	72 (91%)	79
+ 10 km	9 (11%)	71 (89)	80
Total	22	193	215
X^2=0.30, ddl=2, P=0.87			

Table 3: Distribution of ANC1 implementation frequencies in investigated pregnant women according to distance between respondents' residence and health center in the central borough of Cobly in 2013.

Religion and ANC1: Table 4 shows ANC1 frequency in investigated pregnant women according to religion.

Religions	ANC1		TOTAL
	Early	Delayed	
Animist	9 (7%)	128 (93%)	137
Catholic	4 (14%)	24 (86%)	28
Muslim	4 (22%)	14 (78%)	18
Protestant	5 (16%)	27 (84%)	32

TOTAL	22	193	215
X^2 =8.50,ddl=3, P =0.03			

Table 4: Distribution of ANC1 implementation frequencies in investigated pregnant women according to their religion in the central borough of Cobly in 2013.

Nature of pregnancy and ANC1: The variable « nature of pregnancy» admitstwomodalities: « intended » and« unintended ». Table 5 shows ANC1 frequencies in the investigated pregnant women according to nature of pregnancy.

Nature of pregnancy	ANC1		TOTAL
	Early	Delayed	
Intended	21 (13%)	133 (87%)	154
Unintended	2 (3%)	59 (97%)	61
TOTAL	22	192	215
X^2=4.80,ddl=1,P =0.02			

Table 5: Distribution of ANC1 implementation frequencies in investigated pregnant women according to nature of pregnancy in the central borough of Cobly in 2013.

Discussion

ANC coverage in the first quarter of pregnancy in the central borough of Cobly in 2013: This research work has proved that ANC coverage rate in the first quarter of pregnancy in the central borough of Cobly was 10.23%. Our rate is lower than the one of N'diaye [6] who had published a 32% rate of early ANC1 in the health district of Richard-Toll in Senegal. In Madagascar, Rakotoseheno and al. [7] had discovered that the mean age of pregnancy at the time of initial ANC was 5.1 ± 1.5 months, thus reflecting an early ANC1 which is almost nil.

Women's knowledge of ANC importance in the central borough of Cobly in 2013: In our study, 73% of pregnant women said that ANC1 start-up period was the first quarter of pregnancy. That ratio is lower than the one resulting from the study conducted by Soltani and al. in the Tunisian Sahel where 97.3% of the respondents knew that the first visit must take place during the first quarter of pregnancy. About 75% of them argued that the number of prenatal care visits recommended was at least equal to four (04). Soltani and al. found that 58.7% of women knew the minimum number of ANC [8].

As regards women's point of view on ANC, more than half of them i.e. 65.6% of respondents said that ANC was compulsory for all pregnant women. Thus, it may be concluded that ANC importance is perceived by most of the women in the central borough of Cobly. Actually, 60% of them argued that early ANC helped prevent pathologies and 54.9% that it helped facilitate childbirth.

The main factors associated with delayed initial ANC in pregnant women in the central borough of Cobly in 2013: Early ANC1 implementation had a statistically significant relationship with husband's educational attainment. These outcomes are similar to the ones found at national level according to the Health Survey called EDS IV [9] where antenatal care was strongly influenced by the educational attainment of the pregnant woman or of her husbands. N'DIAYE [6] had found a significant relationship between delayed ANC1 and illiterate social profile.

Most pregnant women claimed that they dedicated themselves to traditional practices before ANC1. 54.4% particularly recognized that they informed the woman of her pregnancy through her mother-in-law and of the announcement ceremony through an aunt and religious leaders before anything else. Respondents' religion was statistically associated with ANC1 implementation. The influence of (animistic) religion might be explained by the fact that pregnant woman awaits the rites or the ceremony she must perform before anything else. According to animists, «those ceremonies announce to the gods that woman is pregnant to seek their protection against evil spirits».

This case study has suggested that the nature of pregnancy was statistically associated with the implementation of initial prenatal care. Actually, unintended pregnancies cause lack of motivation to start early ANC sessions. This result is similar to the one of Ndiaye in Senegal 2005 [6] whose research work demonstrated that the nature of pregnancy (intended or not) had a significant relationship with ANC1 timely implementation.

Conclusion

In the central borough of Cobly, initial antenatal care is delayed by sociocultural factors and religious practices. Improved ANC1 coverage is possible through educational activities on the occasion of any contact with mothers or pregnant women, by enhancing populations' educational attainment and also by making local leaders embrace it.

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